

In the Claims:

Claims 7, 14, and 21 are canceled. Claims 1, 3, 5, 8, 10, 12, 15, 17, 19, 22, 24-26 are amended. The claims are as follows:

1. (Currently Amended) A method, comprising:

providing a first semiconductor device;

analyzing the first semiconductor device to determine ~~at least one a~~ first critical dimension error for a first feature of a first plurality of features within the first semiconductor device;

determining from said first ~~said at least one~~ critical dimension error, a dose of electron beam exposure to correct the ~~at least one~~ first critical dimension error during a subsequent process to form a second semiconductor device, said subsequent process comprising;

providing [[a]] said second semiconductor structure device, wherein the second semiconductor structure device comprises a photo resist layer on a semiconductor substrate; forming a second plurality of features in the photo resist layer, wherein ~~at least one a~~ second feature of the second plurality of features comprises the ~~at least one~~ first critical dimension error;

correcting the ~~at least one~~ first critical dimension error for the second feature by selectively exposing only the ~~at least one~~ second feature comprising the first critical dimension error to an electron beam comprising said determined dose of electron beam exposure.

2. (Previously Presented) The method of claim 1, wherein the dose of electron beam exposure comprises a power level for the electron beam for a specified amount of time.

3. (Currently Amended) The method of claim 1, wherein said correcting the first critical dimension error comprises decreasing a size of the ~~at least one~~ second feature.

4. (Previously Presented) The method of claim 1, wherein said determining the dose of electron beam exposure comprises:

providing a graphical relationship between a changing of critical dimension size changes and dosage of electron beam exposure; and

choosing the dose of electron beam exposure for a desired size change in critical dimension size, said choosing being based on said graphical relationship.

5. (Currently Amended) The method of claim 1, wherein said analyzing comprises measuring a plurality of critical dimensions within the first semiconductor device to determine the ~~at least one~~ first critical dimension error.

6. (Original) The method of claim 1, wherein said analyzing comprises performing a functionality test of the first semiconductor device to determine a plurality of operating conditions for a plurality of electrical components within the first semiconductor device.

7. (Canceled)

8. (Currently Amended) The method of claim 1, further comprising forming an electrical component in a space in the second semiconductor device that is defined by the ~~at least one~~ second feature.

9. (Original) The method of claim 8, wherein the electrical component is selected from the group consisting of a transistor, a resistor, a wire, a diode, and a capacitor.

10. (Currently Amended) A method, comprising:

providing a mask and a semiconductor structure, wherein the semiconductor structure comprises a photo resist layer on a semiconductor substrate; measuring on the mask, a plurality of critical dimensions within a pattern on the mask to determine a first at least one critical dimension error for a first critical dimension within said pattern;

propagating radiation through the mask to expose the photo resist layer to form a plurality of features in the photo resist layer, wherein at least one a first feature of the plurality of features comprises the at least one first critical dimension error from the pattern on the mask;

determining from said at least one first critical dimension error from the pattern on the mask, a dose of electron beam exposure that will be used to correct the at least one first critical dimension error for the at least one first feature comprising the at least one critical dimension error; and

correcting the first critical dimension error by selectively exposing only the first at least one feature comprising the first critical dimension error to an electron beam comprising said determined dose of electron beam exposure that corrects the first critical dimension error of the at least one first feature.

11. (Original) The method of claim 10, wherein the dose of electron beam exposure comprises a power level of the electron beam for a specified amount of time.

12. (Currently Amended) The method of claim 10, wherein said correcting the first critical dimension error comprises decreasing a size of the ~~at least one~~ first feature.

13. (Previously Presented) The method of claim 10, wherein said determining the dose of electron beam exposure comprises:

providing a graphical relationship between a changing of critical dimension size changes and dosage of electron beam exposure; and

choosing the dose of electron beam exposure for a desired size change in critical dimension size, said choosing being based on said graphical relationship.

14. (Canceled)

15. (Currently Amended) The method of claim 10, further comprising forming an electrical component in a space in a semiconductor device that is defined by the ~~at least one~~ first feature.

16. (Original) The method of claim 15, wherein the electrical component is selected from the group consisting of a transistor, a resistor, a wire, a diode, and a capacitor.

17. (Currently Amended) A method, comprising:

providing a semiconductor structure, wherein the semiconductor structure comprises a photo resist layer on a semiconductor substrate; forming a plurality of features in the photo resist layer; measuring a plurality of critical dimensions of the plurality of features to determine at

least one a first critical dimension error for at least one a first feature of the plurality of features; determining from said at least one first critical dimension error, a dose of electron beam exposure to correct the at least one first critical dimension error for the at least one first feature of the plurality of features;

correcting the at least one first critical dimension error by selectively exposing only the at least one first feature comprising the first critical dimension error to an electron beam comprising said determined dose of electron beam exposure that corrects the first critical dimension error of the at least one first feature.

18. (Original) The method of claim 17, wherein the dose of electron beam exposure comprises a power level of the electron beam for a specified amount of time.

19. (Currently Amended) The method of claim 17, wherein said correcting the first critical dimension error comprises decreasing a size of the at least one first feature.

20. (Previously Presented) The method of claim 17, wherein said determining the dose of electron beam exposure comprises:

providing a graphical relationship between a changing of critical dimension size changes and dosage of electron beam exposure; and choosing the dose of electron beam exposure for a desired size change in critical dimension size, said choosing being based on said graphical relationship.

21. (Canceled)

22. (Currently Amended) The method of claim 17, further comprising forming an electrical component in a space in a semiconductor device that is defined by the ~~at least one~~ first feature.

23. (Original) The method of claim 22, wherein the electrical component is selected from the group consisting of a transistor, a resistor, a wire, a diode, and a capacitor.

24. (Currently Amended) A method, comprising:

providing a mask photo resist layer;

forming a plurality of features in the mask photo resist layer;

measuring a plurality of critical dimensions of the plurality of features in the mask photo resist layer to determine ~~at least one~~ a first critical dimension error for ~~at least one~~ a first feature of the plurality of features;

determining from said ~~at least one~~ first critical dimension error, a dose of electron beam exposure that will be used to correct the ~~at least one~~ first critical dimension error for the ~~at least one~~ first feature comprising the ~~at least one~~ first critical dimension error; and

correcting the first critical dimension error by selectively exposing only the ~~at least one~~ first feature comprising the first critical dimension error to an electron beam comprising said determined dose of electron beam exposure that corrects the first critical dimension error of the ~~at least one~~ first feature.

25. (Original) The method of claim 24, wherein the dose of electron beam exposure comprises a power level of the electron beam for a specified amount of time.

26. (Currently Amended) The method of claim 24, wherein said correcting the first critical dimension error comprises decreasing a size of the ~~at least one~~ first feature.

27. (Previously Presented) The method of claim 24, wherein said determining the dose of electron beam exposure comprises:

providing a graphical relationship between a changing of critical dimension size changes and dosage of electron beam exposure; and

choosing the dose of electron beam exposure for a desired size change in critical dimension size, said choosing being based on said graphical relationship.

28. (Previously Presented) The method of claim 1, wherein said determined dose of electron beam exposure comprises multiple emissions of an electron beam for a specified amount of time.

29. (Previously Presented) The method of claim 6, wherein said analyzing further comprises comparing said plurality of operating conditions to a plurality of calculated operating conditions of the first semiconductor device.

30. (Previously Presented) The method of claim 6, wherein said analyzing further comprises comparing said plurality of operating conditions to a plurality of actual operating characteristics of a second semiconductor device known to comprise no CD errors.

31. (Previously Presented) The method of claim 10, wherein said determined dose of electron beam exposure comprises multiple emissions of an electron beam for a specified amount of time.

32. (Previously Presented) The method of claim 17, wherein said determined dose of electron beam exposure comprises multiple emissions of an electron beam for a specified amount of time.

33. (Previously Presented) The method of claim 24, wherein said determined dose of electron beam exposure comprises multiple emissions of an electron beam for a specified amount of time.